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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/957,422

09/20/2001

Takayuki Fujioka

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08/02/2006

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EXAMINER

BRIGGS, NATHANAE L

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 08/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/957,422

Applicant(s)

FUJIOKA ET AL.

Examiner

Nathanael Briggs

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

Drawings

1. Figures 14B, 15B, 17B, and 18B should be designated by a legend such as -- Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 1 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 recites the limitation "the reflow" in line 11. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 6 recites the limitation "the minimum resolution of photolithography" in the last line. There is insufficient antecedent basis for this limitation in the claim.

Furthermore, the specification fails to particularly define the "minimum resolution of photolithography." Accordingly, the examiner interprets the minimum resolution to be approximately 1 μm , as disclosed in paragraph [0026], lines 9-10, of the specification.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsuda et al. (US 5,936,688).

9. Regarding claim 1, Tsuda discloses a method of manufacturing a diffusing reflector (see figures 1A-M and 2A-E, for instance) having processes of preparing a

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substrate (11); forming a resin film having photosensitivity (12a) on said substrate (11); providing gathering of pillar-shaped bodies (12b) isolated each other through patterning (13) of said resin film (12a) with the photolithography; forming uneven surface layer (12c) having the maximum inclination angle of under 12° (Fig. 2B) by gently deforming individual said pillar-shaped bodies (12b) through a heating process causing reflow (column 10, lines 8-11); and forming a metal film (36) on gathering of said gently deformed uneven surface layer (37). Claim 1 is therefore unpatentable.

10. Regarding claim 2, Tsuda discloses a method of manufacturing a diffusing reflector as claimed in claim 1 (see figures 1A-M and 2A-E, for instance), wherein said maximum inclination angle is about 10° (Fig. 2B). Claim 2 is therefore unpatentable.

11. Regarding claim 3, Tsuda discloses a method of manufacturing a diffusing reflector as claimed in claim 1 (see figures 1A-M, 2A-E, and 5F, for instance), having a process of alleviating said maximum inclination angle (Fig. 2B) by coating said gently deformed uneven surface layer (32c) with resin (34a) to bury the flat opening between said uneven surface layers isolated each other. Claim 3 is therefore unpatentable.

12. Regarding claim 4, Tsuba discloses a method of manufacturing a diffusing reflector as claimed in claim 1 (see figures 1A-M and 2A-E, for instance), wherein said reflow process is the heat treatment under the temperature of about 220°C (column 10, lines 12-13). Claim 4 is therefore unpatentable.

13. Regarding claim 5, Tsuba discloses a method of manufacturing a diffusing reflector as claimed in claim 1 (see figures 1A-M, 2A-E, and 5F, for instance), wherein gathering of polygonal pillar-shaped bodies (12c; column 17, lines 32-36) isolated each

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other by the divided patterning of said resin film (34a) by said photolithography is provided. Claim 5 is therefore unpatentable.

14. Regarding claim 6, Tsuba discloses a method of manufacturing a diffusing reflector as claimed in claim 5 (see figures 1A-M, 2A-E, and 5F, for instance), wherein said resin film (34a) is patterned by the divided patterning means so that size of gap between said polygonal pillar-shaped bodies (32c) isolated each other is almost equal to the minimum resolution of photolithography (column 13, lines 33-40). Claim 6 is therefore unpatentable.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathanael Briggs whose telephone number is (571) 272-8992. The examiner can normally be reached on 8:30 AM to 5:00 PM (EST) Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathanael Briggs
7/26/2006


ANDREW SCHECHTER
PRIMARY EXAMINER